AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-352

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-352.01
Straight Key Night on OSCAR 2006

AMSAT News Service Bulletin 352.01
From AMSAT HQ SILVER SPRING, MD.
December 18, 2005
To All RADIO AMATEURS
BID: $ANS-352.01

Once again, AMSAT-NA is pleased to sponsor Straight Key Night on OSCAR for enjoyment by all radio amateurs.

OSCAR SKN 2006 will run for 24 hours, 0000-2400 UTC, on 1 January 2006. It's very simple: no rules, no scoring, and no need to send in a log. Just operate CW through any OSCAR satellite using a straight hand key, working as many other SKN participants as you can. Contacts via the moon (OSCAR Zero) count too.

As in past years, all participants are requested to nominate one of the operators they worked for "Best Fist" recognition. Your nominee need not have the best fist of those you heard, just of those you worked.

Please send all nominations to Ray Soifer via w2rs@arrl.net.

A list of those nominated will be published via the AMSAT News Service in early February, and in The AMSAT Journal.

[ANS thanks Ray, W2RS for the above information]

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SB SAT @ AMSAT $ANS-352.02
OSCAR-11 REPORT for December

AMSAT News Service Bulletin 352.02
From AMSAT HQ SILVER SPRING, MD.
December 18, 2005
To All RADIO AMATEURS
BID: $ANS-352.02

During the period 21 November to 14 December 2005 the VHF beacon on 145.826 MHz has been heard from 05 to 10 December.

Signals have been very variable during this period. Sometimes received at good strength, at other times they were inaudible, even with the BFO switched ON (ie. in CW mode).

If the watchdog resets as expected, then the beacon should restart around 31 December. However, more observations are needed to confirm the timing of the watchdog timer, and whether it is being reset prematurely. Therefore, it may be worth listening for the satellite a few days before 31 December.

The on-board clock continues to show a very large error. On 09 December it was 21.8 days slow.

All the analogue telemetry channels, 0 to 59 are zero, ie they have failed. The status channels 60 to 67 are still working.

The eclipses have now ended, and the satellite should be in continuous sunlight for the remainder of this year, and next year until early May. This should help the satellite to continue transmitting, although continuous sunlight can cause problems due to excessive temperatures. Power supply problems can be caused by poor earth pointing attitude, ie the sunlight illuminating the ends of the satellite, instead of the solar arrays.

The watchdog timer appears to be operating on the 20 day cycle, ie. approximately ten days ON followed by 10 days OFF. It appears to be unaffected by problems of the on-board clock. However, poor solar attitude, and battery problems, may be combining to produce a low 14 volt line supply. This appears to be causing the beacon to switch OFF prematurely, and resets the watchdog timer cycle. It seems very likely that the battery is now unable to retain its charge, due to having endured around 100,000 partial charge/discharge cycles, always a problem with NiCad cells. When analogue telemetry was transmitted, it showed an unexplained current drain from the 14 volt line. This just adds to the present problems.

The Beacon frequencies are -
VHF 145.826 MHz. AFSK FM ASCII Telemetry
UHF 435.025 MHz. OFF
S-band 2401.5 MHz. OFF

Listeners to OSCAR-11 may be interested in visiting my website which contains an archive of news & telemetry data. It also contains details about using a soundcard or hardware demodulators for data capture. There is software for capturing data, and decoding ASCII telemetry. The URL is www.users.zetnet.co.uk/clivew/

[ANS thanks Clive G3CWV for the above information]

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SB SAT @ AMSAT $ANS-352.03
PCSAT-1 Enters Eclipse Cycle

AMSAT News Service Bulletin 352.03
From AMSAT HQ SILVER SPRING, MD.
December 18, 2005
To All RADIO AMATEURS
BID: $ANS-352.03

The PCSAT-1 digipeater on 145.825 was still going strong and working well up until December 15.

The activity page http://pcsat.aprs.org shows about 75 stations accessed PSCAT-1 between December 13 and 14. This won't last much longer since PCSAT-1 is now back to 30 minute eclipses headed towards worst-case of 35 minutes during the week of December 18-25.

Sometime before 2202z on the 15th PCSAT-1 suffered a reset to W3ADO-1 and lost its low power settings. Now at 1740z on the 17th, the US Naval Academy Satellite Lab sent the restore commands, but with 33 minute eclipses, it is doubtfull they will hold. We may have lost her until March, 2006.

The command station at the US Naval Academy should be able to keep PCSAT-1 alive indefinately as long as stations do not user her in the dark and the command stations never let her 68 hour command watch-dog timer time out.

Anyone can work PCSAT-1 with ANY typical 1200 baud packet station on 145.825. Just set your path to UNPROTO APRS via ARISS (the same that you use via ARISS on the ISS or via PCSAT2). Mobiles with the D700 or the TH-D7 HT APRS radios will see packets directly on their front panel and can work it from their mobile.

For more information see:
http://www.ew.usna.edu/~bruninga/pcsat.html

[ANS thanks Bob, WB4APR and the US Naval Academy Satellite Lab for the above information]

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SB SAT @ AMSAT $ANS-352.04
Amateur Station Hears MRO at 45 Million Miles

AMSAT News Service Bulletin 352.04
From AMSAT HQ SILVER SPRING, MD.
December 18, 2005
To All RADIO AMATEURS
BID: $ANS-352.04

This week the Mars-Net e-mail list reported that Paul Marsh, an amateur observer, has detected Mars Reconnaissance Orbiter at X band at a range of 45 million miles from Earth.

The MRO transmits on Deep Space Network channel 32 which is 8439.444444 MHz. By the time that reaches Earth, due to doppler the frequency has dropped to around 8439.031 MHz. The MRO has a 3 meter diameter dish antenna driven by a 100 Watt X-band TWTA to transmit signals to Earth. The signal coming in our direction is of the order of 4.2 mega watts of RF.

The signal was clearly visible in the FFT display of an SDR-14 software radio, and was just audible in SSB bandwidth of a communications receiver. The signal was consistently about 6 to 8 dB above the noise floor. More details can seen at: http://www.uhf-satcom.com/mro/.

[ANS thanks Joe, KM1P, the Mars-net list, and Uhf-satcom.com
for the above information]

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SB SAT @ AMSAT $ANS-352.05
ARISS Status for the week of December 12, 2005

AMSAT News Service Bulletin 352.05
From AMSAT HQ SILVER SPRING, MD.
December 18, 2005
To All RADIO AMATEURS
BID: $ANS-352.05

1. Texas Contact Successful

On Thursday, December 8, Sanderson High School in Sanderson, Texas experienced a successful contact with Bill McArthur, KC5ACR. Bill was able to answer 18 questions posed to him by 10 students, as an audience of approximately 25 students, teachers, parents, and others looked on. Local dignitaries who attended the event included the county judge and the county sheriff. Among the media that covered the contact were The Terrell County News Leader, The Davis Mountain Times (Fort Davis, TX), The Big Bend Sentinel (Alpine, TX) and The Alpine Avalanche (Alpine, TX).

2. Upcoming School Contacts

Mt Carmel High School in San Diego, California made a contact on Thursday, December 15 at 15:42 UTC via KG6EQU.

Carman Park Elementary School, a crew pick, located in Flint, Michigan, has been approved for an ARISS contact. It will take place on Wednesday, December 21 at 16:35 UTC via the telebridge station, WH6PN. The Carman Park contact will be webcast.
To join the event:
URL: <https://e-meetings.mci.com>
CONFERENCE NUMBER: 5169963
PASSCODE: SPACE STATIO

The audio will also be available through EchoLink AMSAT (node 101377) and EDU_Net (node 77992) conference room servers and will be broadcast into the IRLP Discovery Reflector 9010, with streaming audio available from the Discovery Reflector Web Site, http://www.discoveryreflector.ca/

3. McArthur Still Active on Voice

Over this past week, Bill McArthur, KC5ACR, made contacts with stations in the U.S. on December 6. He also spoke with stations in Australia, New Zealand and the U.S. on December 11.

4. Astronaut Training Status

Astronaut Michael Lopez-Alegria, who passed his amateur radio license exam on Wednesday, November 30 has been issued the callsign KE5GTK.

[ANS thanks Carol, KB3LKI for the above information]

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SB SAT @ AMSAT $ANS-352.06

FM Satellites: Remember to Listen for N5AFV Aboard a Cruise Ship

AMSAT News Service Bulletin 352.06
From AMSAT HQ SILVER SPRING, MD.
December 18, 2005
To All RADIO AMATEURS
BID: $ANS-352.06

Allen, N5AFV is at sea in the Carribean with his FM satellite gear on a cruise ship sailing from Port Everglades, FL to the island of Dominica and back. He plans to work the FM birds AO-27, SO-50 and AO-51 using his Icom W32A HT and an AL800 telescoping antenna.

While Allen plans shipboard operation, and has done so successfully in the past, there is always the possibility that he will not be allowed to operate from the ship. If that happens, Allen will try to operate onshore at the ports of call where he can do so.

Itinerary
Dec 17, Leave Port Everglades, FL, 1700 EST
         Call signs N5AFV and N5AFV/C6A
Dec 18, Nassau, Bahamas, 0800-1600 local time
         Call sign N5AFV/C6A
Dec 19, At Sea
         Call sign N5AFV/C6A
Dec 20, San Juan, PR, 1300-2300 local time
         Call sign KP4/N5AFV
Dec 21, St. Thomas, USVI, 0800-1700 local time
         Call sign KP2/N5AFV
Dec 22, Dominica, 1200-1900 local time
         Call sign J79AFV
Dec 23, St. Barts, 0800-2300 local time
         Call sign FJ/N5AFV
Dec 24, Tortolla, BVI, 0800-1500 local time
         Call sign VP2V/N5AFV
Dec 25, At Sea
         Call sign N5AFV/C6A
Dec 26, At Sea
         Call sign N5AFV/C6A
Dec 27, Arrive Port Everglades, FL, 0700 EST
         Call sign N5AFV

[ANS thanks Allen, N5AFV for the above information]

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SB SAT @ AMSAT $ANS-352.07
First Announcement of January 2006 Amsat Kid's Day on AO-51

AMSAT News Service Bulletin 352.07
From AMSAT HQ SILVER SPRING, MD.
December 18, 2005
To All RADIO AMATEURS
BID: $ANS-352.07

January 2006 Amsat Kid's Day on AO-51

Amsat-NA, the AO-51 Command Team, and the AO-51 Operations Team will sponsor Kid's Day on AO-51 on January 8, 2006. The event will run from approximately 0100 UTC 8 January until 0345 UTC 9 January. The event is open to all kids, worldwide. We ask all amateur radio stations to give this short time window to promote satellite operations with kids, by actually showing a

kid how to make contacts via AO-51, providing a station to contact,
or stepping aside to allow others to make contacts with the kids.
During the event, please limit contacts to stations that are
operating with kids at the microphone. This should allow the
kids to have a nice QSO and pass some information. Kids can tell
their name, age, who is helping them operate on AO-51, where they
live, and other information about themselves.

AO-51 will be configured in the following mode during the event.
Please note the change in the uplink frequency for the event.
The PL tone will be turned off for the event.

Uplink: 145.880 mhz FM voice
Downlink: 435.300 mhz FM voice

The digital transponder on 435.150 will be turned off during
the event.

See http://www.arrl.org/FandES/ead/kd-rules.html on the ARRL
website for more Kids Day information.

Have fun and enjoy AO-51!

73 KE4AZN
Amsat VP-Operations
Echo Command Station

[ANS thanks Mike, KE4AZN for the above information]

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SB SAT @ AMSAT $ANS-352.08
AMSAT Awards This Week

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Bruce Paige, KK5DO, AMSAT Director Contests and Awards says
this week, congratulations go out to all of the following.

Kenneth Beck, WI7B, South Africa AMSAT Communication Achievement Award #US92

Ernie Howard, W8EH, 51 on 51 Award #47
Peter Meier, DC7TS, 51 on 51 Award #48
James Clay, ND9M, 51 on 51 Award #49

To see all the awards visit http://www.amsat.org.

[ANS thanks Bruce, KK5DO for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining donors
to AMSAT Project Funds, will be eligible to receive additional benefits.
Application forms are available from the AMSAT Office.

73,

This week's ANS Editor,
JoAnne Maenpaa, WB9JEJ
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